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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,443	02/26/2002	Farshid Ahmady	SLN-101-A	6029

7590 10/06/2003  
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EXAMINER

COCKS, JOSIAH C

ART UNIT PAPER NUMBER

3749

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/083,443

Applicant(s)

AHMADY, FARSHID

Examiner

Josiah C. Cocks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings filed with the application on 2/26/02 are accepted by the examiner.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the thermostat" in line 1. There is insufficient antecedent basis for this limitation in the claim. Applicant has not identified a thermostat. As best can be determined, it appears applicant intended to recite --a thermostat-- and has been regarded as such for the purpose of an examination on the merits.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Johnson* (US # 4,727,854) (hereinafter "*Johnson '854*") in view of *Cowan* (US # 3,805,763).

*Johnson '854* discloses in Figures 1 a radiant heating system similar to that described in applicant's claims 1-20 including a gas burner (10), and a tube (22) and a reflector (24) forming a conduit that is connected to the burner and to an exhaust tube (see Fig. 1). *Johnson '854* also recognizes that "hot spots" are a concern in a radiant heater of this type and proposes a solution in creating a reverse peak (69) to minimize the hot spots (see col. 5, lines 25-49). However, *Johnson '854* also discloses an embodiment of his heater that does not include the reverse peak (see Fig. 2). A person of ordinary skill in the art would understand from this disclosure that undesirable hot spots would result in the embodiment illustrated in Fig. 2. *Johnson '854* further discloses the use of a thermostat and temperature sensor that function to control the burner (note Fig. 1 and the disclosure of U.S. Patent No. 4,716,883 which *Johnson '854* incorporates by reference).

*Johnson '854* does not disclose the use of a fan positioned adjacent the hot spot for cooling the external surface of the conduit.

*Cowan* teaches a radiant heating system in the same field of endeavor as *Johnson '854* wherein the system of *Cowan* includes a fan assembly (41) that is positioned to direct cooling air into the outer casing of a radiant tube (see col. 4, lines 37-47). The fan directs cooling air through a series of perforations (43) that are positioned along the length of the outer casing (see col. 4, lines 47-64). The examiner regards this structure as the equivalent of a fan positioned adjacent a hot spot as recited by applicant.

Therefore, in regard to claims 1-20, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of *Johnson '854* to incorporate the cooling fan assembly of *Cowan* as this fan assembly desirably serves to minimize any rise in temperature of a outer casing/conduit (see *Cowan*, col. 4, lines 43-47). Such rises in temperature/hot spots are acknowledged by *Johnson '854* to be undesirable (see *Johnson '854*, col. 5, lines 25-49).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Rozzi, Rattner, Hemsath, Jones*, DE 36 30 098, and WO 95/32399 are included to further show the state of the art concerning cooling structures for radiant heating systems.

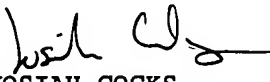
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett, can be reached at (703) 308-0101. The fax phone numbers for this Group are (703) 308-7764 for regular communications and (703) 305-3463 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc  
September 30, 2003

  
JOSIAH COCKS  
PATENT EXAMINER  
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